a member of the Berwickshre Club), Mr. T. B. Lloyd Baker (the well-known originator of the "Reformatory System"), Dr. Daubeny, of Oxford, Hugh Strickland, and some others, who met "at the Black Bull Inn, in Birdlip, a village on the summit of the Cotteswold range overlooking the vales of Gloucester and Worcester, about six miles south of Cheltenham, and seven south-west of Gloucester." There the club was inaugurated, Mr. Baker being elected the first president. "The labours of the club have been most conspicuous in geological investigation, for which the district offers such a rich field. Many of the members have, by their recorded observations, attained to high distinction. In the words of the president, 'It will suffice to mention the names of Daubeny, Strickland, Woodward, Maskelyne, Wright, Moore, Buckman, Jones, Lycett, Brodie, Symonds, Maw, and Etheridge, all members of the club, to recall at once names of writers well known in the scientific annals of the county, and of whom some have by their works obtained a more than European reputation.'"

The Woolhope Club, in Bedfordshire, whose publications are also well known as among the most valuable of those of provincial societies, was formed in 1851, and derived its name from the mass of Silurian rocks described by Sir Roderick Murchison as the "Woolhope Valley of Elevation." This club and the Cotteswold have occasional joint field days, and their example is followed by several other societies, and might, we think, with advantage be followed much more extensively than it is.

The Worcestershire Naturalists' Club originated in the same year as the Cotteswold, followed the year after by the Huddersfield Naturalists' Society, and in 1849 by the Yorkshire Naturalists' Club. Besides the four field-clubs mentioned, other six societies originated in this decade, most of them distinctly scientific, including the Torquay Natural History Society, the Bristol Microscopic Society, and the Isle of Wight Philosophical and Scientific Society.

In the decade between 1850 and 1860, twenty-two local scientific societies were founded, of which sixteen are field-clubs, including such well-known names as the Woolhope, just mentioned, the London Geologists' Association, the Liverpool Naturalists' Field Society, the Bath Natural History and Antiquarian Field Club, and the Malvern Field Club.

(*To be continued.*)

HARTWIG'S "SEA AND ITS WONDERS"

The Sea and its living Wonders. A popular account of the Marvels of the Deep, and of the progress of Maritime Discovery from the earliest ages to the present time. By Dr. G. Hartwig. Fourth edition, enlarged and improved, with numerous woodcuts and eight chromoxylographic plates. (London: Longmans, 1873.)

NO other evidence is needed beyond the publication of the fourth edition of this work to prove the demand there is in Great Britain for this kind of literature, The reading public want to know what about the sea, and all that is in it; and, in their eagerness to know, they buy even such books as this. When will scientific men turn their attention towards teaching the public as far as it can be taught, in a correct, yet popular manner, the rudiments of biological science? When they do the time for such books as the one we must now notice will have passed away, and the resources of the great publishing firm who issue it will be engaged on more truly solid and important work. As an indication of what we mean, let us contrast the popular works of Hartwig or Figuier with Quatrefages' "Souvenirs d'une Naturaliste," or Gosse's "Devonshire Rambles;" or let the reader imagine what a delightful work the one before us would have been if written by, say Huxley, Allman, Günther, or Wyville Thomson. But to return to this volume, which consists of three parts; (1) the Physical Geography of the Sea; (2) the Inhabitants of the Sea; (3) the Progress of Maritime Discovery. The latter part commences with the maritime discoveries of the Phœnicians, and ends with a reference of sixteen lines in length to the numerous scientific voyages of circumnavigation of the present century.

Before proceeding to very briefly notice Parts I. and II., we have to object most strongly to the woodcuts not being drawn to any scale; thus, on page 101 the Rorqual is figured as rather smaller than the Herring, while, on the same page, and just above these figures, will be found a Whale Louse, and a Lepas represented as bigger than either. Surely figures like these must terribly mislead the ordinary reader, who, though he may possibly have some notion of the size of a herring, cannot be supposed to be aware of the dimensions of the whale's parasites. Many of the woodcuts are very good, but several of them are bad, and the majority of them are not seen in this volume for the first time; this we would not so much object to if the woodcuts were selected to illustrate the text, and not, as is too often the case in this work, the text written so as to make some forced allusion to the woodcuts.

Though the Dugong is illustrated by copying the woodcut from Tennent's work on Ceylon, yet scarcely a word is to be found about it in the chapter on the Cetacea. The Tailor birds' nest is figured on page 143, but no allusion whatever is made to it in the text. The great Auk is figured, and in the accompanying explanation is said to congregate in vast flocks on the rocky islets and headlands of the Northern Coasts. Surely a little careful supervision would have prevented such mistakes as these occurring. But leaving the subject of the woodcuts, we come to consider the letterpress; and here, too, not only a more careful supervision, but some more acquaintance with the subject would have been desirable. Why, among the Fishes, should the Anchovy have five lines devoted to it, when not one word is to be found about that equally important little fish, the Sardine? and surely half a page would not have been too much to devote to that interesting living wonder of the sea, the Whitebait. It would be an easy, but withal a useless task to point out other errors of omission and commission among the other classes.

Among the Corals and Sponges the author had enough to guide him, for he has borrowed wholesale the really beautiful woodcuts illustrating Prof. Greene's Manuals; if he had borrowed equally largely from their text, he would have made this the most trustworthy portion of his book.

No notice is taken of such important new forms as Rhizocrinus, or Brissinga, nor do we find mention under

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the Sponges of such strikingly beautiful ones as belong to the genera Euplectella, Holtenia, &c., though, indeed, some allusion is made to these in the chapter on the geographical distribution of marine life. But perhaps we have said enough to show that while the subject of this work is a good one, it might easily have been treated by a writer more familiar with it in a better, a more original, and a more comprehensive manner. E. P. W.

OUR BOOK SHELF

The Theory of Evolution of Living Things. By Rev. G. Henslow. (Macmillan and Co.)

SCIENTIFIC men cannot but feel how false is the stimulus given to that form of literature of which the above-named work is an example. If considerable pecuniary reward is offered for the production of treatises in favour of any theory, or of the mutual compatibility of any two or more different doctrines, the work will undoubtedly be produced, however inaccurate the theory, or however dissimilar the doctrines. That mistaken enthusiasm which led to the production of the Bridgwater Treatises and the establishment of the Actonian Prize, has resulted in the publication during the last year of two Actonian prize essays, the former of which, by Mr. B. T. Lowne, we noticed on a previous occasion, whilst the latter is the one under consideration. The present author's treatment of his subject is much that which would have been adopted by Paley if he had been living at the present day. Several previously accepted axioms are shown to be incompatible with the existing position of biological science, and their weakness is well brought forward. Other considerations of modern development are introduced, and it is in these that the difficulty of combining the two doctrines appears. For instance, the origin of moral evil is said to be "the conscious abuse of means, instead of using them solely for the ends for which they were designed." But on evolutionary principles, it can hardly be said that there are means for designed ends, because that peculiarity in an organ which is of service is the only one retained, insomuch that if the delicate sensitiveness of the conjunctiva of the eye were to prove of more value to the individual than its sight, the power of vision would most probably become lost at the expense of the developing tactile organ. "The continual effort of beings to arrive at mutual and beneficial adjustments" is said to be a great principle of nature; does not the term "struggle for existence" imply something very different from this? Again, that "animals and plants do not live where circumstances may be best suited to them, but where they *can*, or where other animals and plants will respectively let them live," is quoted by the author as an instance of Nature falling short of that absolute degree of perfection which may be conceived as possible; however, there cannot be many who think a locality a suitable residence, in which they are prevented from taking up their abode, or perhaps entering, by the animals and plants which inhabit it. In other places similar weaknesses may be found in the argument adopted. In one thing Mr. Henslow has done great good: he has shown that it is consistent with a full dogmatic belief, to hold opinions very different from those taught as natural theology some half century and more ago.

LETTERS TO THE EDITOR

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. No notice is taken of anonymous communications.*]

Transfer of the South Kensington Museum

I AM glad to see that an effective opposition is likely to be made to the ill-advised proposal of the Government to place the South Kensington Collections under the control of the fifty irresponsible Trustees of the British Museum.

In common with many other naturalists I had always hoped that the national collections of natural history, when removed to the new buildings in South Kensington, would be freed from the rule of the Trustees and placed under a responsible director. The memorial of which I enclose a copy, and the republication of which would, I think, be opportune at the present juncture, will serve to show that I am by no means alone in believing that such a change would be beneficial to Science.

It would seem, however, that the Government, so far from acceding to our views, have resolved to proceed in exactly the contrary direction, and to increase the power of the Trustees. I can only hope that we may succeed in preventing them from carrying this retrograde measure into effect.

P. L. SCLATER

44, Elvaston Place Queen's Gate, Nov. 17

"*Copy of a Memorial presented to the Right Hon. the Chancellor of the Exchequer*

"To the Rt. Hon. the Chancellor of the Exchequer

"Sir,—It having been stated that the scientific men of the metropolis are, as a body, entirely opposed to the removal of the natural history collections from their present situation in the British Museum, we, the undersigned Fellows of the Royal, Linnean, Geological, and Zoological Societies of London, beg leave to offer to you the following expression of our opinion upon the subject.

"We are of opinion that it is of fundamental importance to the progress of the natural sciences in this country, that the administration of the national natural history collections should be separated from that of the library and art collections, and placed under one officer, who should be immediately responsible to one of the Queen's Ministers.

"We regard the exact locality of the National Museum of Natural History as a question of comparatively minor importance, provided that it be conveniently accessible and within the metropolitan district.

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ALFRED R. WALLACE, F.Z.S.

"London, May 14, 1866"

Deep-sea Soundings and Deep-sea Thermometers

WILL you allow me to reply to a letter from Messrs. Negretti and Zambra that appeared in vol. viii. p. 529, in reference to my Casella-Miller Deep Sea Thermometer, in which they accuse me and the late respected Dr. Miller of "plagiarism."

I presume, by this remark, that they intend to convey the idea of their own introduction having been imitated, because they state also that "their thermometer is identical in every respect except in size." Without venturing to trespass upon your valuable space by now going into more detail to prove the con-

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